

SPECIFICATION FOR APPROVAL

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CUSTOMER:						
CUSTOMER P/N:						
CND-TEK P/N.:	G4812S					
DESCRIPTION:	1000 BASE-T POE+MAGNETICS MODULES					
REF NO:	QTC-001					
REV/NO:	V1.02					
DATE:	2015/03/02					
ATTACHMENT:						
■ SPECIFICATION						
■ SAMPLE Q'TY OF SAMPLES PCS						
	V	CUSTOMER'S SIGNATURE	REMARK			

FULL APPROVED

CONDITIONAL APPROVED

REJECTED



G4812S

1000 BASE-T MAGNETICS MODULES



V1.0.2 Feb 2, 2015



Shenzhen CND-TEK Electronics Co.,Ltd

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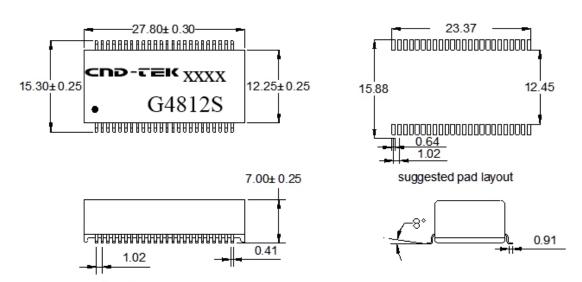
Email: sales2@cd-tek.com Http://www.cd-tek.com



1. FEATURES:

- 1.1 Designed for long haul Gigabit Ethernet 100/1000 Base-T, full duplex applications.
- 1.2 Supports four pairs of category 5 UTP cable, Cable interface for isolation and low common mode emissions.
- 1.3 Cable interface for isolation and low common mode emissions
- 1.4 Compliant with IEEE 802.3af standard for 1000 Base-T, Designed to support 1:1 Turns Ratio Transceivers.
- 1.5 Suitable For End-apan and Mid-span POE+ Applications 720mA Current Capadility Per POE Port
- 1.6 Operating Temperature range: -0°CTO +70°C
- 1.7 Storage temperature range: -25 °C TO +125 °C

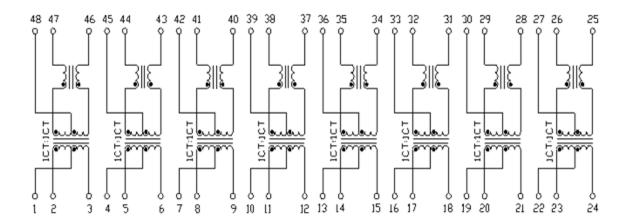
2. DIMENSIONS & MARKING



Note: 1. Dimension: mm

2. Unless otherwise specified, all tolerances are: ± 0.05 mm

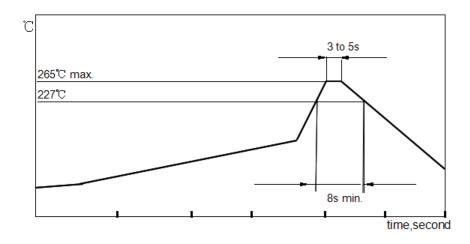
3. SCHEMATICS:



4.ELECTRICAL SPECIFICATIONS @25°C

- 4.1 OCL: 350 μH Min. @ 100 KHz, 100mV with 24mA DC Bias
- 4.2 Leakage Inductance: 0.5 μH Max. @ 100KHz, 0.2V
- 4.3 Cw/w: 28 pF Max. @ 100KHz, 0.2V
- 4.4 DCR: 1.20Ω Max.
- 4.5 Turns Ratio(±5%): 1CT:1(TX), 1CT:1(RX)
- 4.6 Polarity: 2-47, 5-44, 8-41, 11-38,14-35,17-32,20-29,23-26 In-Phase
- 4.7 Insertion Loss: -1.1 dB Max. (TX & RX)@ 1-100 MHz
- 4.8 Return Loss: -18 dB Min @ 0.5-30MHz
 - -15 dB Min @ 40 MHz
 - -13 dB Min @ 60 MHz
 - -11 dB Min @ 80 MHz
 - -10 dB Min.@ 100 MHz
- 4.9 Cross Talk: -45 dB Min.@ 30 MHz
 - -40 dB Min.@ 60 MHz
 - -35 dB Min.@ 100 MHz
- 4.10 Common Mode Rejection: -43 dB Min.@ 1-30 MHz
 - -37 dB Min.@ 60 MHz
 - -33 dB Min.@ 80-100 MHz
- 4.11 Isolation HI-POT: 1500Vrms 1mA 1Second

5. Recommended Lead Free IR Reflow Soldering Curve:



Item	Soldertechnique simulation	Temperature (℃)	Time(s)	Temperature ramp/immersion and emersion rate
1	Solder iron	350 ± 10 (solder irno temp)	4~5	
2	Vapor phase reflow	215±5 (vapor temp)	60±5	
3	IR/convection reflow	255±5 (component temp)	30±5	1°C/s~4°C/s time above 183°C 90s~120s

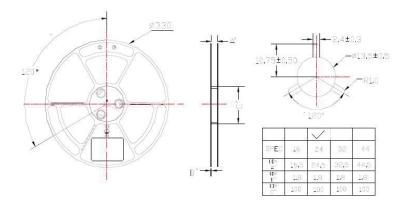
Note: The curve includes recommended value only, please adjust your equipment to make sure the solder process. Details please refers to the standard J-STD-020.

6. Reliability Test Criteria:

- **6.1 Terminal strength:** Pull test withstand 9.8N 60+/-0.5S no looseness or movement.
- **6.2 Solderbility:** Dipped in 245 °C+/-5 °C molten solder for 3+/-0.5 seconds,95% min shall be smooth any and bright.
- **6.3 Resistance to soldering heat :** Convection reflow condition setting: peak temperature at $260^{\circ}\text{C} + 0/-5^{\circ}\text{C}$ above 217°C for 90-180 seconds, ramp-up rate 2-3 °C/s. Ramp-down rate 6°C/s Max. No mechanical problem found. No electrical failure found per our specification.
- **6.4 Vibration:** 1.5mm amplitude total excursion 10-55-10 Hz traversed in 1minute, x.y.z, axis for 2 hours. Shall not be any abnormality.
- **6.5 Random drop (Packing condition):** Height 60cm, 3 times on the wood floorboard ,shall not be any abnormality.
- **6.6 Dry heat:** 100+/-2°C 96 hours.
- **6.7 Cold:** -20+/-2 °C 96 hours.
- **6.8 Damp Heat:** 60+/-2°C, 93+/-3% RH 96 hours.
- **6.9 Change of temperature:** exposed 5 cycle; each consisting of 30 minutes at $-20+/-2^{\circ}$ C, 2-3 minutes at 20+/-2°C, 30 minutes at 85+/-2°C, 2-3 minutes at 20+/-2°C.

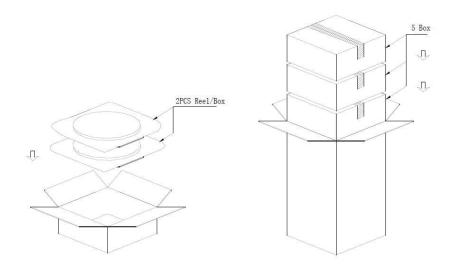
Packing Specification

1、Each Reel Qty: 350pcs/pkg



2. Total unit transformer in carton:

 350×5 (Total Reel in Carton) = 1750 PCS



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